to reach the water with the vessel in its lightest seagoing condition, under unfavorable conditions of trim, and with the vessel listed up to 20 degrees either way.

§ 199.157 Free-fall lifeboat launching and recovery arrangements.

(a) The launching appliance for a free-fall lifeboat must be designed and installed so that the launching appliance and the lifeboat it serves operate as a system to protect the occupants from harmful acceleration forces and to effectively clear the vessel.

(b) The launching appliance must be designed and arranged so that, in its ready to launch position, the distance from the lowest point on the lifeboat it serves to the water surface with the vessel in its lightest seagoing condition does not exceed the lifeboat's certificated free-fall height.

(c) The launching appliance must be arranged to preclude accidental release of the lifeboat in its unattended stowed position. If the means provided to secure the lifeboat cannot be released from inside the lifeboat, the means to secure the lifeboat must be arranged to preclude boarding the lifeboat without first releasing it.

(d) Each free-fall launching arrangement must be provided with a secondary means to launch the lifeboat by falls. Such means must comply with the requirements of §§ 199.150, 199.153, and 199.155. Notwithstanding § 199.150(c), the secondary launching appliance must be capable of launching the lifeboat against unfavorable conditions of trim of 2 degrees either way and of list of 5 degrees either way. The secondary launching appliance need not comply with the speed requirements of §§ 199.153 (g), (h), and (i). If the secondary launching appliance is not dependent on gravity, stored mechanical power, or other manual means, the launching arrangement must be connected both to the vessel's main and emergency power supplies.

§ 199.160 Rescue boat embarkation, launching and recovery arrangements.

(a) Each rescue boat must be capable of being launched with the vessel making headway of 5 knots in calm water. A painter may be used to meet this requirement.

(b) Each rescue boat embarkation and launching arrangement must permit the rescue boat to be boarded and launched in the shortest possible time.

(c) The rescue boat must meet the embarkation and launching arrangement requirements of §§ 199.110 (e) and (g), 199.150, 199.155, and if the launching arrangement uses falls and a winch, § 199.153.

(d) If the rescue boat is one of the vessel's survival craft, the rescue boat must also meet the following requirements:

(1) The rescue boat must meet the muster and embarkation arrangement requirements of § 199.110 and the launching station requirements of § 199.120.

(2) If the launching arrangement uses a single fall, the rescue boat may have an automatic disengaging apparatus approved under approval series 160.170 instead of a lifeboat release mechanism.

(e) Rapid recovery of the rescue boat must be possible when loaded with its full complement of persons and equipment. If the rescue boat is also a lifeboat, rapid recovery must be possible when loaded with its lifeboat equipment and an approved rescue boat complement of at least six persons.

(f) Each rescue boat launching appliance must be fitted with a powered winch motor.

(g) Each rescue boat launching appliance must be capable of hoisting the rescue boat when loaded with its full rescue boat complement of persons and equipment at a rate of not less than 0.3 meters per second (59 feet per minute).

§ 199.170 Line-throwing appliance.

(a) *General.* Each vessel must have a line-throwing appliance approved under approval series 160.040.

(b) *Stowage.* The line-throwing appliance and its equipment must be readily accessible for use.

(c) *Additional equipment.* Each vessel must carry the following equipment for the line-throwing appliance—

(1) The equipment on the list provided by the manufacturer with the approved appliance; and

(2) An auxiliary line that—

(i) Is at least 450 meters (1,500 feet) long;

(ii) Has a breaking strength of at least 40 kiloNewtons (9,000 pounds-force); and

(iii) Is, if synthetic, of a dark color or certified by the manufacturer to be resistant to deterioration from ultraviolet light.

§ 199.175 Survival craft and rescue boat equipment.

(a) All lifeboat and rescue boat equipment—

(1) Must be secured within the boat by lashings, by storage in lockers or compartments, by storage in brackets or similar mounting arrangements, or by other suitable means;

(2) Must be secured in such a manner as not to interfere with any abandonment procedures or reduce seating capacity;

(3) Must be as small and of as little mass as possible;

(4) Must be packed in a suitable and compact form; and

(5) Should be stowed so the items do not—

(i) Reduce the seating capacity;

(ii) Adversely affect the seaworthiness of the survival craft or rescue boat; or

(iii) Overload the launching appliance.

(b) Each lifeboat, rigid liferaft, and rescue boat, unless otherwise stated in this paragraph, must carry the equipment listed in this paragraph and specified for it in table 199.175 of this section under the vessel's category of service. A lifeboat that is also a rescue boat must carry the equipment in the table column marked for a lifeboat.

(1) *Bailer.* The bailer must be buoyant.

(2) *Bilge pump.* The bilge pump must be approved under approval series 160.044 and must be installed in a ready-to-use condition as follows:

(i) The bilge pump for a lifeboat approved for less than 70 persons must be either size 2 or size 3.

(ii) The bilge pump for a lifeboat approved for 70 persons or more must be size 3.

(3) *Boathook.* In the case of a boat launched by falls, the boathook must be kept free for fending-off purposes. For inflated rescue boats and for rigid-inflated rescue boats, each boathook must be designed to minimize the possibility of damage to the inflated portions of the hull.

(4) *Bucket.* The bucket must be made of corrosion-resistant material and should either be buoyant or have an attached lanyard at least 1.8 meters (6 feet) long.

(5) *Can opener.* A can opener may be in a jackknife approved under approval series 160.043.

(6) *Compass.* The compass and its mounting arrangement must be approved under approval series 160.014. In a totally enclosed lifeboat, the compass must be permanently fitted at the steering position; in any other boat it must be provided with a binnacle, if necessary to protect it from the weather, and with suitable mounting arrangements.

(7) *Dipper.* The dipper must be rustproof and attached to a lanyard that should be at least 0.9 meters (3 feet) long.

(8) *Drinking cup.* The drinking cup must be graduated and rustproof. The cup should also be of a breakage-resistant material.

(9) *Fire extinguisher.* The fire extinguisher must be approved under approval series 162.028. The fire extinguisher must be type B–C, size II, or larger. Two type B–C, size I fire extinguishers may be carried in place of a type B–C, size II fire extinguisher.

(10) *First aid kit.* The first aid kit in a lifeboat and in a rescue boat must be approved under approval series 160.041. The first aid kit in a rigid liferaft must be approved under approval series 160.054.

(11) *Fishing kit.* The fishing kit must be approved under approval series 160.061.

(12) *Flashlight.* The flashlight must be a type I or type III that is constructed and marked in accordance with the American Society of Testing and Materials (ASTM) F1014. One spare set of batteries and one spare bulb, stored in a watertight container, must be provided for each flashlight.

(13) *Hatchet.* The hatchet must be approved under approval series 160.013. The hatchet should be stowed in brackets near the release mechanism and, if